

2017

STATE OF SUSTAINABILITY

City of Pittsburgh

Department of City Planning
Division of Sustainability + Resilience

2018

PEOPLE

PITTSBURGH EQUITY INDICATORS

PLACE

ONE PGH RESILIENCE STRATEGY

PLANET

PITTSBURGH CLIMATE ACTION PLAN

PERFORMANCE STATE OF SUSTAINABILITY

Pittsburgh's approach to urban growth is one that values innovation, inclusivity and sustainability at its core. Our urban growth P4 model (People, Planet, Place, Performance) was developed with Heinz Endowments and regional community partners. P4 is implemented throughout City operations in various stages of departmental planning and development.

The Division of Sustainability + Resilience activates P4 as a framework, guiding our division's initiatives and outreach. Since 2008, we have produced four primary reports that convey the City's current status and detail growth opportunities. Each report serves as a living document responding to one of the P4 principles. Among them, Pittsburgh's State of Sustainability is a summary of our division's seasonal performance.

Visit us at troyhillgarden@gmail.com
PITTSBURGHPA.GOV/ONEPGH

STATE OF SUSTAINABILITY

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Sustainability + Resilience
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10 Years of Sustainability
timeline



CELEBRATING 10 YEARS OF SUSTAINABILITY

our history

After a generation of soot filled skies, we as a city recognized that the quality of our environment impacts not only the economic prosperity of our neighborhoods, but the health and welfare of those that call Pittsburgh home.

In response to an outcry for a clean city we could be proud of, the Division of Sustainability + Resilience (formerly, The Office of Sustainability and Energy Efficiency) was affirmed in 2008.

Over the course of a decade, we've traveled around the world learning and sharing the comeback story of Pittsburgh and are proud of the vision we carry with us.

our mission & vision

Our mission is to engage city partners in developing an enduring, adaptable city and empower citywide, holistic, decision making.

Our vision is for Pittsburgh to continue to grow while recognizing our need to not only consider our impact on the health and welfare of the City's natural resources, but continue to assess and devise strategies to invest in them, looking to them as assets that add real value to the economic viability and physical development of our communities and residents.



our values

- **Ecology:** Fostering innovative and collaborative solutions that overcome barriers to ecologically responsible behavior
- **Economic Prosperity:** Encouraging economic opportunities for all communities
- **Equity:** Ensuring the development of fair and just policies that are inclusive of all residents
- **Improvement:** Improving the internal operations of municipal government, to reduce the fiscal and environmental impact related to our local government's services
- **Leadership:** Being a leader locally, nationally and globally in the collective effort to mitigate the impacts of climate change while growing our local economy
- **Quality of Life:** Maintaining and ensuring equitable access to clean air, clean water, fresh and affordable food, healthy landscapes, navigable infrastructure, and livable communities for our residents and businesses
- **Resilience:** Building a Pittsburgh that can endure the challenges we face while maintaining or improving the environment in which we live

our team

Grant Ervin, Chief Resilience Officer + Assistant Director of City Planning

Shelly Danko-Day, Open Space Specialist

Aftyn Giles, Senior Sustainability Coordinator

Rebecca Kiernan, Senior Resilience Coordinator

Flore Marion, City Energy Advisor

Sarah Yager, Sustainability + Resilience Annalist

PITTSBURGH GOALS

Pittsburgh Greenhouse Gas Emission Reduction Goals

(As compared to 2003 Baseline)

- 20% GHG Reduction by 2023
- 50% GHG Reduction by 2030
- 80% GHG Reduction by 2050



Pittsburgh 2030 Goals

Internal City Operations:

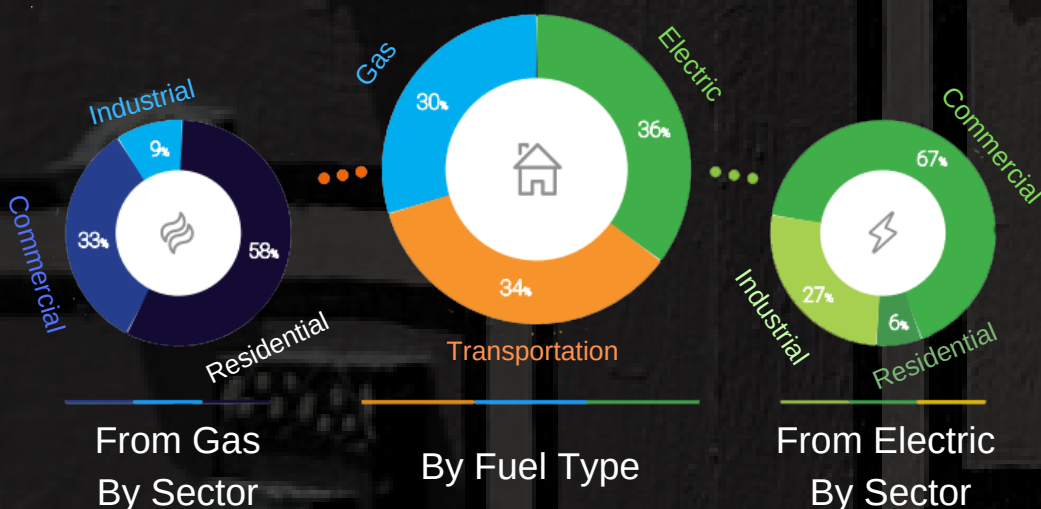
- 100% renewable energy use
- 100% fossil fuel free fleet
- 50% water reduction
- Divestment from fossil fuels

Citywide:

- 50% energy use reduction
- 50% water consumption reduction
- 50% transportation emission reduction
- Zero Waste-refuse diversion from landfills



2013 Greenhouse Gas Emissions Breakdown





PITTSBURGH SUSTAINABILITY STATS

OBJECTIVE CONSTRUCTIVE PROGRESSIVE

17TH

American Council for an Energy Efficient Economy Ranking of 51 cities

\$255K

Amount of state DEP Grant funding received to begin the electrification of City fleet vehicles

5420

Number of recycling bins distributed since 2016

5%

Better Buildings Challenge Municipal building Energy Intensity Reduction from 2013 levels

10

Number of acres transformed into community assets through Adopt-A-Lot

48%

Green Fleet index rating increase since 2016. Pgh ranked 20 of 100 cities.

2%

Citywide Reduction in Green House Gas Emissions (CO₂) since 2008

10TH

American Lung Association Ranking for worse cities for short term pollution of 200 cities. 29% improvement since 2017

17TH

US Clean Tech Leadership Index Ranking of 50 cities

3

Number of Climate Action Plans published since 2003.

6TH

ACEEE Ranking for cities with residents suffering from high Energy Burden.

6

Number of years Pgh has reported its emissions through the Carbon Disclosure Project

3RD

American Lung Association Ranking of worse cities for ozone of 200 cities.

6.2%

Decline in tree canopy coverage since 2011

8TH

American Lung Association Ranking for worse cities for PM 2.5 of 200 cities.



PLANS + ANALYSIS

Zero Waste Plan

- Pittsburgh's Road-map to Zero Waste was published in 2017
- In coordination with 100 Resilient Cities, the "Road-map to Zero Waste" document was completed for the City of Pittsburgh to use as a guide for developing a Zero Waste Strategic Plan (ZWSP). Once written, the ZWSP will serve as the mechanism that ties all stakeholders together in the City's quest for Zero Waste. Based on site visit meetings and years of expertise, it is the belief of the R20 team that the City of Pittsburgh has the potential to achieve the goal of "Zero Waste by 2030" as pronounced by Mayor Peduto in 2015. The elements critical to the success of Zero Waste include, but are not limited to, committed leadership, modifiable and scalable infrastructure, engaged citizenry with proven adaptability, and innovation, all of which are currently possessed by the City in some form. Conversely, these elements are pitted against a city that is hampered with a decades-old, stagnant recycling program that has achieved modest success over the years largely due to limited financing and low landfill disposal fees.

OnePGH

- Preliminary Resilience Assessment 2016, Resilience Strategy 2017, & Investment Prospectus 2018
- After completing and publication of Pittsburgh's OnePGH Resilience Strategy, the City has moved forward with developing a comprehensive list of investments essential for increasing resilience in the city by 2030. This financial plan, the Investment Prospectus, engaged over 100 regional stakeholders in not only project coordination but developing a financial plan to ensure projects in line with the OnePGH plan are provided the resources to be sufficiently mobilized in the coming years. The Investment Prospectus will inform the development of a Social Benefits OnePGH Fund.
- Equity Indicators: The Division of Sustainability and Resilience, working with the Bureau of Neighborhood Empowerment, the RAND Corporation and City University of New York Institute for State and local Government identified 80 indicators to set a baseline and measure progress towards equality across four thematic areas: Health, Food and Safety; Education, Workforce Development and Entrepreneurship; Housing, Transportation, Infrastructure and Environment; and Civic Engagement and Communications. Pittsburgh scored 55 on a scale of 1 to 100, where 1 represents inequality and 100 represents equality. The indicators will be reevaluated annually and will serve as a measurement framework for OnePGH.



Farmers' Market Study

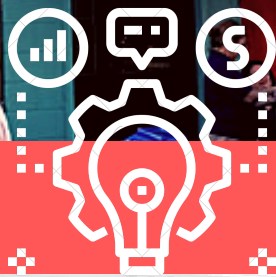
- Farmers' markets benefit cities in many ways; not only do they provide regional access to some of the finest products in and around Pittsburgh, they are local economic drivers and bring fresh produce to areas of the city otherwise identified as food deserts. In an effort to broaden the reach of the farmers' markets and develop more efficient processes for serving residents and vendors; Pittsburgh teamed up with the Farmers Market Coalition to begin a Farmers Market Study of 30 locations with the goal of developing a growth plan to introduce equitable access to healthy food, enhance support for local farmers and strengthen community ties to local markets.

Climate Action Plan 3.0

- Pittsburgh's Climate action plan is a living document that has chronicled Pittsburgh's goals, ideas, and actions to reduce regional greenhouse gases since 2003. In its third iteration, Climate Action Plan 3.0 presents an updated vision for the city in line with P4 and Pittsburgh's 2030 initiative, sets more stringent citywide emission reduction goals and presents sector based emission data, taking stock of regional projects already underway in Pittsburgh.

Energy Baseline Study

- The U.S. Department of Energy (U.S. DOE) and the National Energy Technology Laboratory (NETL) worked in conjunction with the City of Pittsburgh to complete the City's first baseline study focused on the transmission and consumption of energy in the greater Pittsburgh region. The baseline study is the first step to creating an energy strategy to transform how energy is produced, transported, and consumed in Pittsburgh. Achieving this vision will require developing solutions which are unique to Pittsburgh: its climate, topography, energy needs, resources, and existing infrastructure. It will also leverage advanced technologies, new business models, and novel infrastructure concepts. The resulting American "City of the Future" will pave the way for other cities seeking to reinvent their energy systems and establish Pittsburgh as a demonstration for energy innovation.



PROJECTS + INITIATIVES

Fossil Fuel Free Fleet + Solar Trees

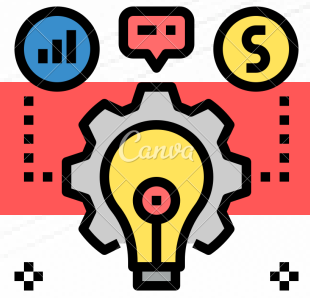
- The City of Pittsburgh is committed to reduce transportation-related greenhouse gas emissions by 50% and operating a fossil fuel free fleet by 2030. To reach this goal, Pittsburgh is evaluating everything from modes of transportation, to parking garages, to outfitting its fleet with electric vehicles.
- Using PA DEP AFIG funding support, the City purchased its first 10 electric vehicles, as well as 5 solar-powered, mobile, EV charging stations with battery storage, capable of powering 10 vehicles.

Energy Intelligence Network

- Pittsburgh's Energy Intelligence Network began in 2014 as a study to encourage data driven decision making for better management of energy use within City owned facilities. The pilot project was conducted at the City County Building in partnership with Carnegie Mellon University's Metro 21: Smart Cities Institute. Due to the success of the project, in 2017, the City began investigating opportunities to scale-up the project to bring all City facilities online by 2030.

Pittsburgh Bin Pilot

- Starting in 2016, Pittsburgh teamed up with Pennsylvania Resources Council, Alcoa Foundation, and Buhl Foundation to pilot, educate and distribute over 1000 bins on one of the City's most challenging pickup routes on the North Side. Leveraging the success of the bin pilot and education campaign, the City expanded the pilot in 2017 with the goal of reaching 4000 additional residents citywide by the end of 2018. Since 2016, Pittsburgh has distributed 5420 bins and plans to distribute bins to all residents. By distributing bins, the City seeks to increase recycling rates, fight litter, save energy, prevent deforestation, and prevent valuable resources from entering our regions' landfills. The bin pilot is a project of the City's Zero Waste initiative.



Love Your Resilient Block

- OnePGH Cities of Service, Love Your Resilient Block offered residents an opportunity to revitalize their neighborhood block by block. This program provided mini grants and City department assets to neighborhood groups to do resilience related projects in empty lots.

EcoDistrict

- As part of the EcoDistrict plan developers can now qualify for a density bonus for Green Buildings.

Transit Screen

- The City of Pittsburgh piloted Pitt's TransitScreen in 2017, making real time commuter information available at the City County Building. With a quick glance at the TransitScreen dashboard, employees and CCB visitors are able to evaluate transportation options and times enabling an efficient commute.

Metro 21, Smart Cities Institute

- Finding its roots as the Traffic 21 Institute in 2009 with an evaluation of city and county roadways; Metro 21, a project of Carnegie Mellon University works with city partners to implement solutions to large scale problems.

Switch PGH

- As part of the Bloomberg Mayor's Challenge, Switch PGH took a deep dive into the state of residential energy use in Pittsburgh and the critical needs of Pittsburgh homeowners.



POLICIES + ORDINANCES

Building Benchmarking + Disclosure

Starting in 2017 Pittsburgh mobilized its Building Benchmarking Ordinance requiring owners of non-residential buildings over 50,000 sqft to annually report their energy and water consumption to the City in a process called benchmarking.

This data informs building owners about a building's energy and water consumption compared to similar buildings, and tracks progress year over year. Owners can use this data to assist in decision making for maintenance and upgrades.

In the spirit of transparency, benchmarking and compliance, data will be available publicly.

The department of Planning's Sustainability and Resilience Division will publish a report in the Fall of 2019, summarizing the performance of Pittsburgh's large building portfolio, and visually illustrate on the online platform which buildings are participating, exempted, eligible but non-participating, and those that chose to voluntarily participate.

Waste + Recycling Regulations

In 2018, the Clean Pittsburgh Commission, a coalition of City and Community stakeholders, including the Mayor's Office, Department of Public Works, Sustainability + Resilience, Pennsylvania Resources Council and Allegheny Clearways, teamed up to assist the City with updating its Waste + Recycling Regulations to help modernize how the City collects, sorts, and manages post consumer materials.

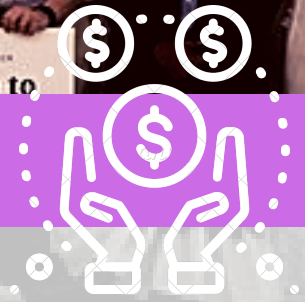
The updates to Chapter 619 of the City Code address recycling requirements including who, what, when and how materials are to be managed.

The changes were made to address resident and Public Works employee safety, clarify how and what is recyclable in Pittsburgh, and to reduce contamination at the collection site.

For more information visit: <https://pittsburghpa.gov/dpw/waste-regulations>



GRANTS + FUNDING



Bloomberg Mayor's Challenge

- Pittsburgh was selected as one of 35 Champion Cities to progress to the 2nd phase of the Mayor's Challenge. Using 100,000 dollars in grant funding, The Pittsburgh team strategized a citywide program to tackle energy burden in an effort to make energy efficient home improvements and resources accessible to City residents. If successful, the overall project will increase the health, comfort, safety, energy efficiency, and affordability of homes in Pittsburgh.

RWJF – Glasgow

- The Robert Wood Johnson Foundation funds a wide array of programs which are working to help build a national Culture of Health. Pittsburgh and Glasgow in partnership with the Consumer Health Coalition have formed a sister City exchange network to develop best practices for developing smart cities, concepts of a universal basic income and the future of work.

ICLIE

- With a generous grant from ICLIE, Pittsburgh was able to share its environmental transformation story on the international scale at the Kyoto +20 conference, in honor of the 20th Anniversary of the Kyoto Protocol.

City Energy Project

- The City of Pittsburgh partnered with Green Building Alliance to make Green Professional Building Skills Training (GPRO) accessible locally to greater Pittsburgh professionals. Through its inaugural cohort in 2017, over 20 local government and authority building professionals and facility managers received GPRO certifications.





EVENTS

Solar Tree Install



Community Supported Agriculture



Investment Prospectus



Mayor's Challenge



Urban Mobility Summit



Water Energy Nexus



Pgh Climate Realities Summit



Resilient Pittsburgh Table



Prepared Pittsburgh



CELEBRATING 10 YEARS OF SUSTAINABILITY

2008

09

Legislation passed to form the Office of Sustainability & Energy Efficiency * Together Green began Single Stream Recycling program * Pittsburgh Climate Initiative Established * Green Initiatives Trust Fund Created * First Pittsburgh Climate Action Plan Published * First Energy & Utilities Manager and City Sustainability Coordinator Hired * First Pittsburgh Solar Week * Western Pennsylvania Energy Consortium Created * City wins Green Power Leadership Award * City deploys smart traffic signals pilot with CMU

10

Green Purchasing Policy Established for the procurement of municipal products and services * First Mayor's Green Guide published * Market Square gets a "Green" face-lift * Federal Better Buildings Challenge Begins

11

First Love Your Block community grant established * Redd Up Zones established * 2nd Sustainability Coordinator Hired * Urban Agriculture Zoning Code created * Municipal waste modernized in City facilities * Sustainability focused workshops established for employees * Summer – Local Government Sustainable Youth Education Program Created

12

Tree Canopy Survey * First Green Workplace Challenge (Now Sustainable Pittsburgh Challenge) * 2030 Districts Begin * Love Your Edible Gardens Program Begins * Don't Trash my Turf Begins * Garden Pittsburgh Program revised * First Bio-diesel refueling station installed for Dep. Of Public Works * Pittsburgh's First Comprehensive Plan begins * Pittsburgh host its first Earth Market

13

Cool Roofs program begins * Sustainable Home Improvement Partnership Begins * Second Green House Gas Inventory Completed *

14

Office of Sustainability joins the Department of Innovation and Performance * 100 Resilient Cities Grant Awarded * First Municipal Waste Audit Completed * Second Climate Action Plan Drafted * First Open Space Specialist Hired * Reporting for CDP and ACEEE * Pittsburgh becomes members of ICLEI and USDN * City begins reporting to 2030 District (1st year) * City's Uptown Ecolnnovation District selected to attend EcoDistrict incubator * City reaches 25% Renewable Energy Purchase through WPEC
§ City completes first fleet baseline inventory

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Office changes to Office of Sustainability & Resilience * Senior Resilience Coordinator and Resilience Policy Analysis Hired * Resilience Road Map Begins * P4 begins * Evaluation of City Facilities Begins * Pittsburgh's First Earth Hour * Vacant Lot Toolkit and Adopt-A-Lot program launched * Urban Agriculture Zoning Code updated * City Kicks off 100 Resilient Cities Program * City signs MOU with Department of Energy for District Energy Innovation * City completes first fleet baseline inventory * OnePGH Initiative Begins

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Pittsburgh Resilience Analysis Published * Pittsburgh accepted as a City Energy Project City * Roadmap to Zero Waste Completed * AmeriCore Resilience Internship Program Begins * Love Your Resilient Block Program Begins * DeLight Pittsburgh Project Established * Third Greenhouse Gas Inventory Completed * City partners with URA, PPA, and GBA to create Green Garages Initiative * City passes Complete Streets Ordinance * City Recognized as Biophelic City * City selected as finalist for Smart Cities Challenge

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Building Disclosure Ordinance Starts * Energy Benchmarking Starts * Pgh named Mayor's Challenge Champion City * CSA established for Municipal Employees * City's first Energy Efficient Day * City purchased Hays Woods creating one of the largest urban parks in the US * Smart waste bins deployed in parks * City co-hosts Climate Realities summit * City partners with PA Resources to distribute recycling bins * Uptown Ecolnnovation District approved by council * City Releases OnePGH Resilience Strategy * City attends U.N. Climate Summit

18

WPEC reaches 35% renewable purchase of electricity * Pittsburgh Investment Prospectus Begins * Prepared PGH Initiative Begins * Third Climate Action Plan Approved * City releases Equity Indicators Report * City and PA-DEP deploys first electric vehicles and solar powered charging * City signs MOU with Danish Embassy and the University of Pittsburgh around district energy technologies * City advances Commercial Energy Benchmarking for all buildings 50,000 sq ft and above.

